C. Remarks

The claims are 1 and 4-24, with claims 1, 19 and 20 being independent. Claim 19 has been withdrawn from consideration as being directed to a non-elected invention. Claims 1 and 20 been amended solely to resolve formal issues raised by the Examiner. Support for this amendment may be found, *inter alia*, in the specification at paragraph [0032]. New claims 21-24 have been added. Support for these claims may be found, *inter alia*, in the specification at paragraphs [0035] and [0039]. No new matter has been added. Reconsideration of the present claims is expressly requested.

Claims 1 and 20 are objected to for formal reasons. Also, claims 1, 4-18 and 20 stand rejected under 35 U.S.C. § 112, second paragraph, as being allegedly indefinite.

Applicants respectfully submit that the above amendments to claims 1 and 20 obviate the above objection and rejection. Accordingly, they should be withdrawn.

Claims 1, 5 and 20 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Viswanatham Katta et al., "A Pulsed Ion Bombardment Time-of-Flight Mass Spectrometer with High Sensitivity for the Analysis of Peptides," 105 *Int. J. Mass Spectrom. Ion Processes* 129-45 (1991) (Katta). Claims 1, 4, 5, 18 and 20 stand rejected under 35 U.S.C. § 103(a) as being allegedly obvious from Katta in view of U.S. Patent No. 6,137,110 (Pellin). Claims 1, 5-17 and 20 stand rejected under 35 U.S.C. § 103(a) as being allegedly obvious from Katta in view of H.F. Arlinghaus et al., "TOF-SIMS Characterization of DNA and PNA Biosensor Chips," *Proceedings of the 12th International Conference on Secondary Ion Mass Spectrometry*, pp. 951-954 (September 1999) (Arlinghaus). The grounds of rejection are respectfully traversed.

Prior to addressing the merits of rejection, Applicants would like to briefly review some of the features and advantages of the present invention. That invention, in pertinent part, is related to a method and apparatus for acquiring information from a device, such as a biochip. This information is obtained by irradiating the device in a discontinuous pattern, which is either random or specifically programmed, so that the influence of the charge-up of the irradiated area is suppressed. Duplicate irradiation of a unit area with the primary ion beam is avoided.

As discussed in the specification of the subject application, Applicants have noted that when a two-dimensional secondary ion image is obtained in a conventional manner by sequentially scanning the primary ion beam, this image is not of a satisfactory quality due to a considerable influence of the charge-up caused by the beam. Therefore, in order to overcome this problem, Applicants obtained the information by irradiating the device in a discontinuous pattern, which is either random or specifically programmed.

Furthermore, since a large portion of the biological materials on the irradiated area is used to generate a secondary ion, the data obtained based on the first irradiation and that based on the second irradiation is essentially different when the surface area of the device is irradiated by a primary ion beam in advance. Consequently, according to the present invention, the irradiated area with the primary ion beam in one scan is not duplicated.

Katta is directed to a pulsed ion bombardment time-of-flight mass spectrometry. Specifically, Kato teaches sweeping an ion beam across a sample probe

face. Secondary sample ions are emitted from the sample tip during a short sweeping interval (see p. 133). However, Applicants respectfully submit that the primary ion beam in Katta is irradiated via a conventional raster scan and the irradiated area is continuously expanded. As discussed, for example, at paragraph [0020] in the specification, raster scanning is not discontinuous.

Katta fails to recognize the problem associated with the charge-up caused by the primary ion beam irradiation. It clearly does not disclose or suggest a solution to this problem, much less a solution as presently claimed.

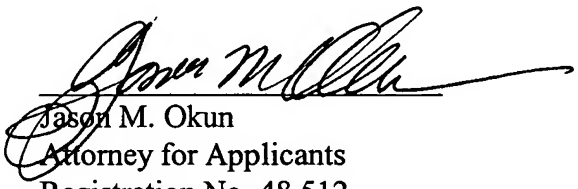
Arlinghaus cannot provide the teachings missing in Katta, as Applicants have already shown in the Amendment filed on August 24, 2005. Specifically, Arlinghaus is directed to a DNA sequencing method. However, Arlinghaus is silent with respect to the nature of the continuity or discontinuity of the scan. Furthermore, like Katta, Arlinghaus does not recognize the problem associated with the charge-up caused by the primary ion beam irradiation. Therefore, Arlinghaus clearly cannot disclose or suggest a solution. In addition, Arlinghaus fails to disclose or suggest a discontinuous scan in which there is no duplicate irradiation of the same unit area in one scan, as presently claimed.

Pellin cannot cure the deficiencies of Katta and Arlinghaus. Pellin discloses a method and an apparatus for generating a high current pulsed ion beam having a narrow energy spread and submicron resolution using laser irradiation. However, Pellin does not disclose or suggest the same above-mentioned features that are missing from the other two cited documents.

In conclusion, it is clear that the cited documents, whether considered separately or in any combination, do not disclose or suggest the presently claimed elements. Wherefore, Applicants respectfully request that the outstanding rejections be withdrawn and that the present case be passed to issue.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



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